

FIG. 1

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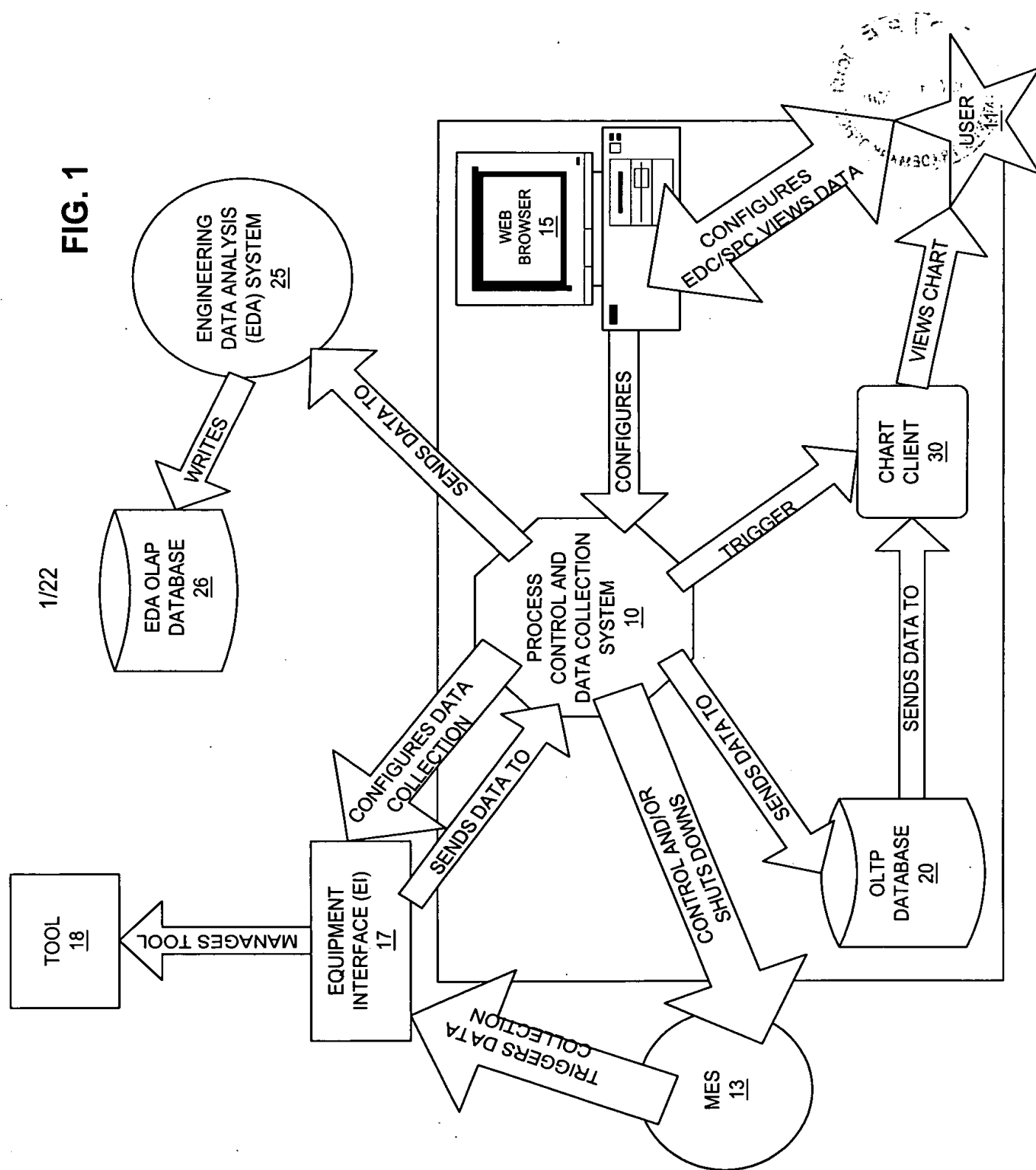


FIG. 2

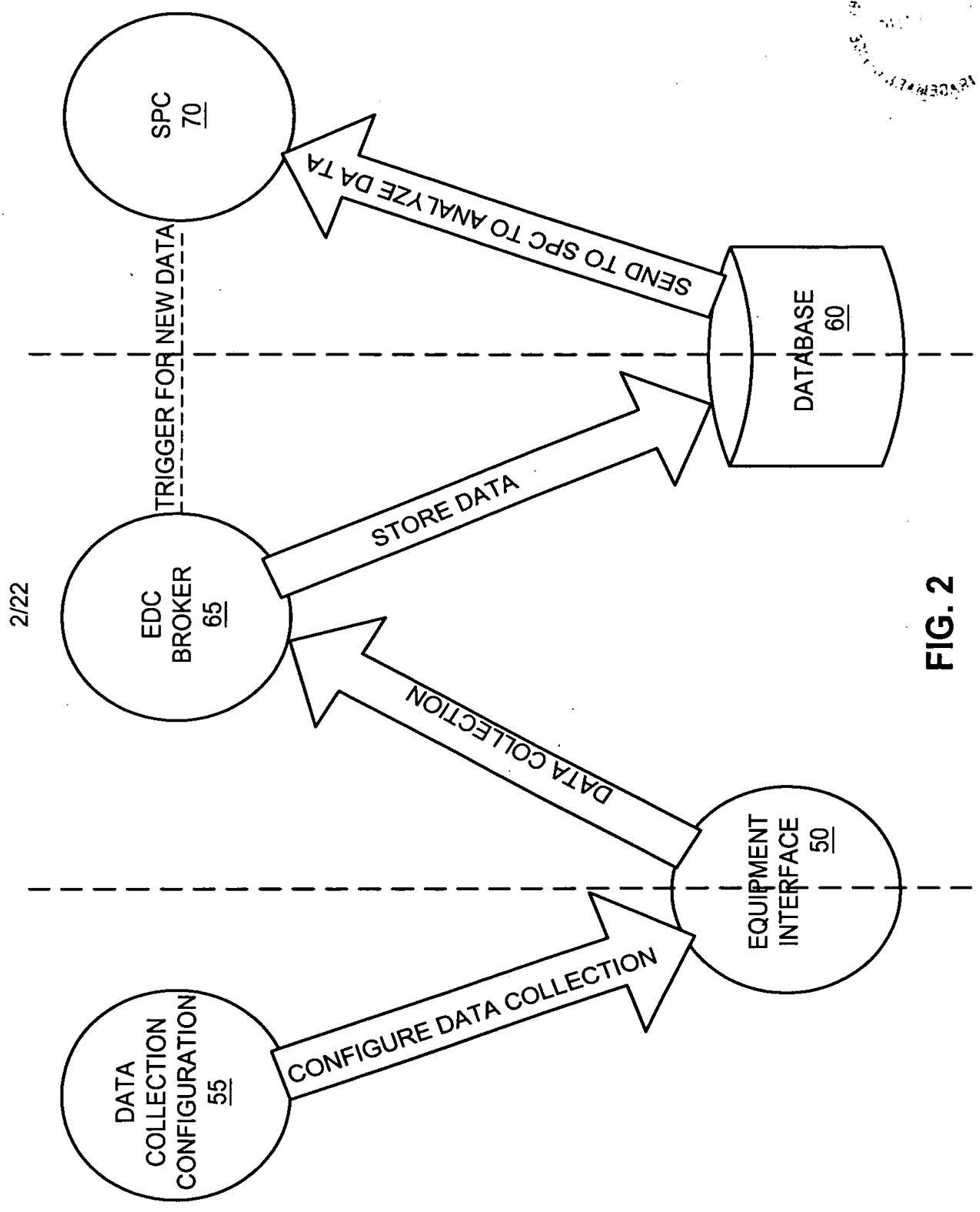
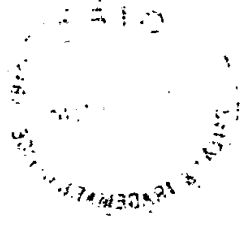
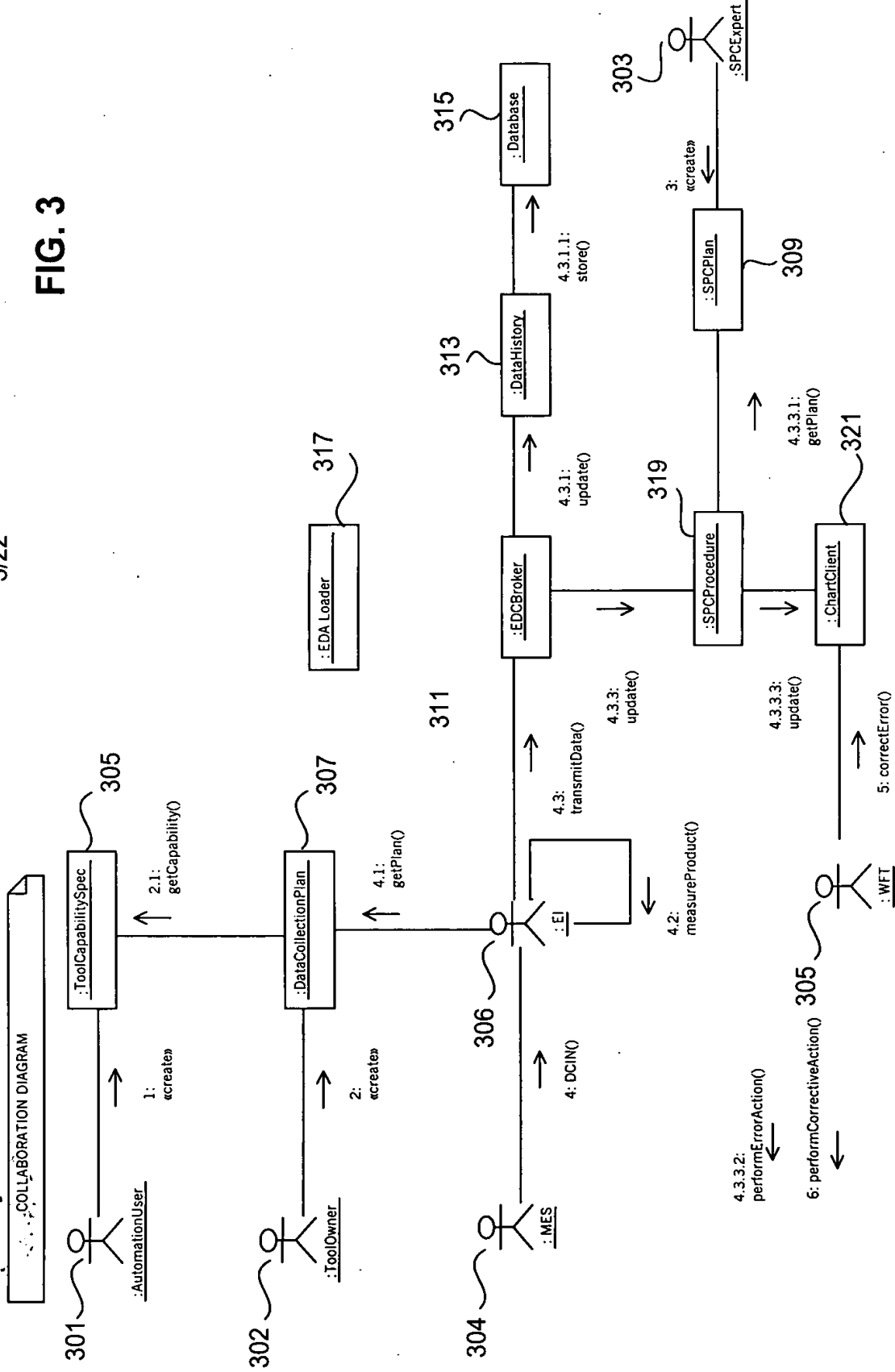


FIG. 2



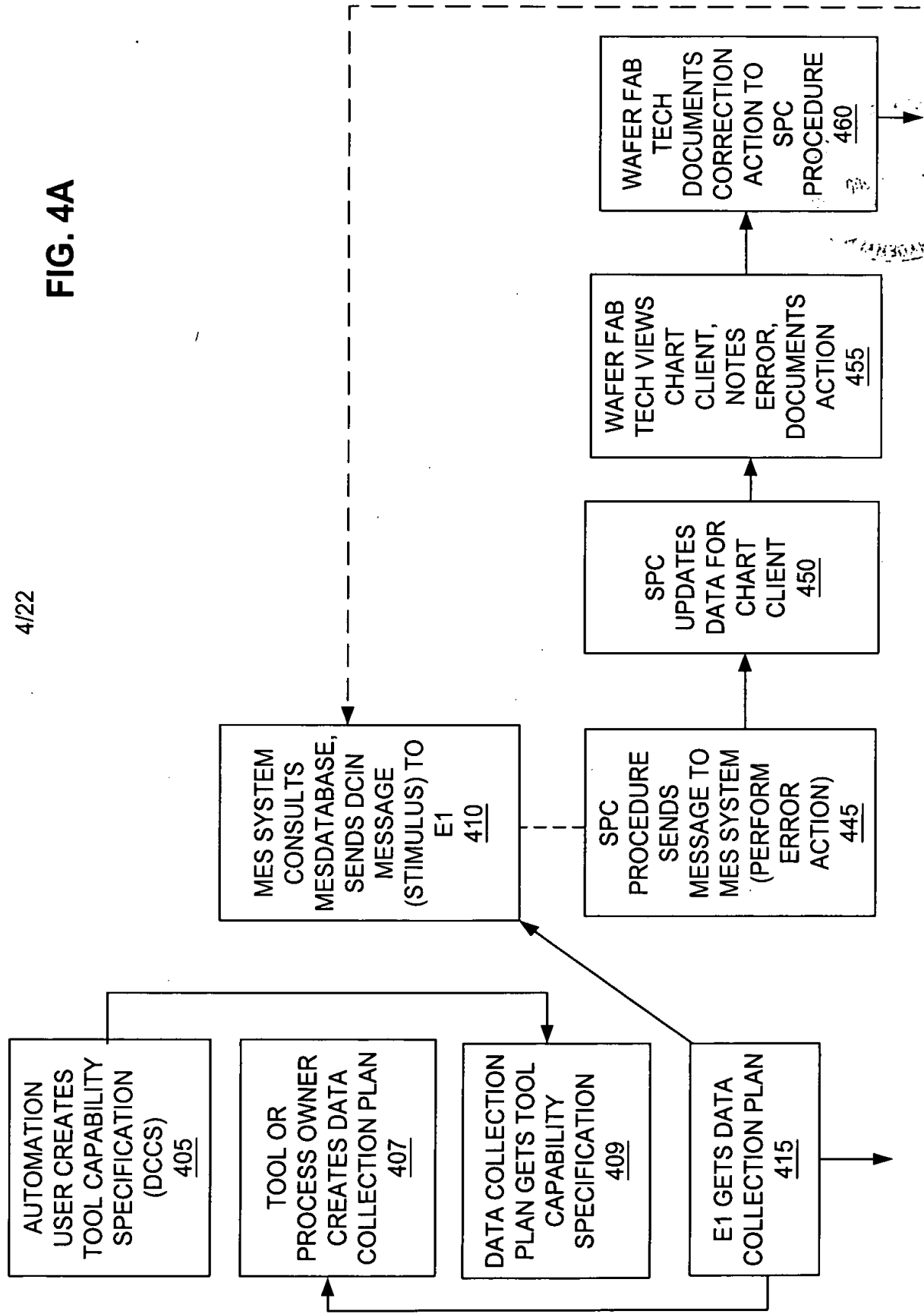
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FIG. 3



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FIG. 4A



TOP SECRET 02250550

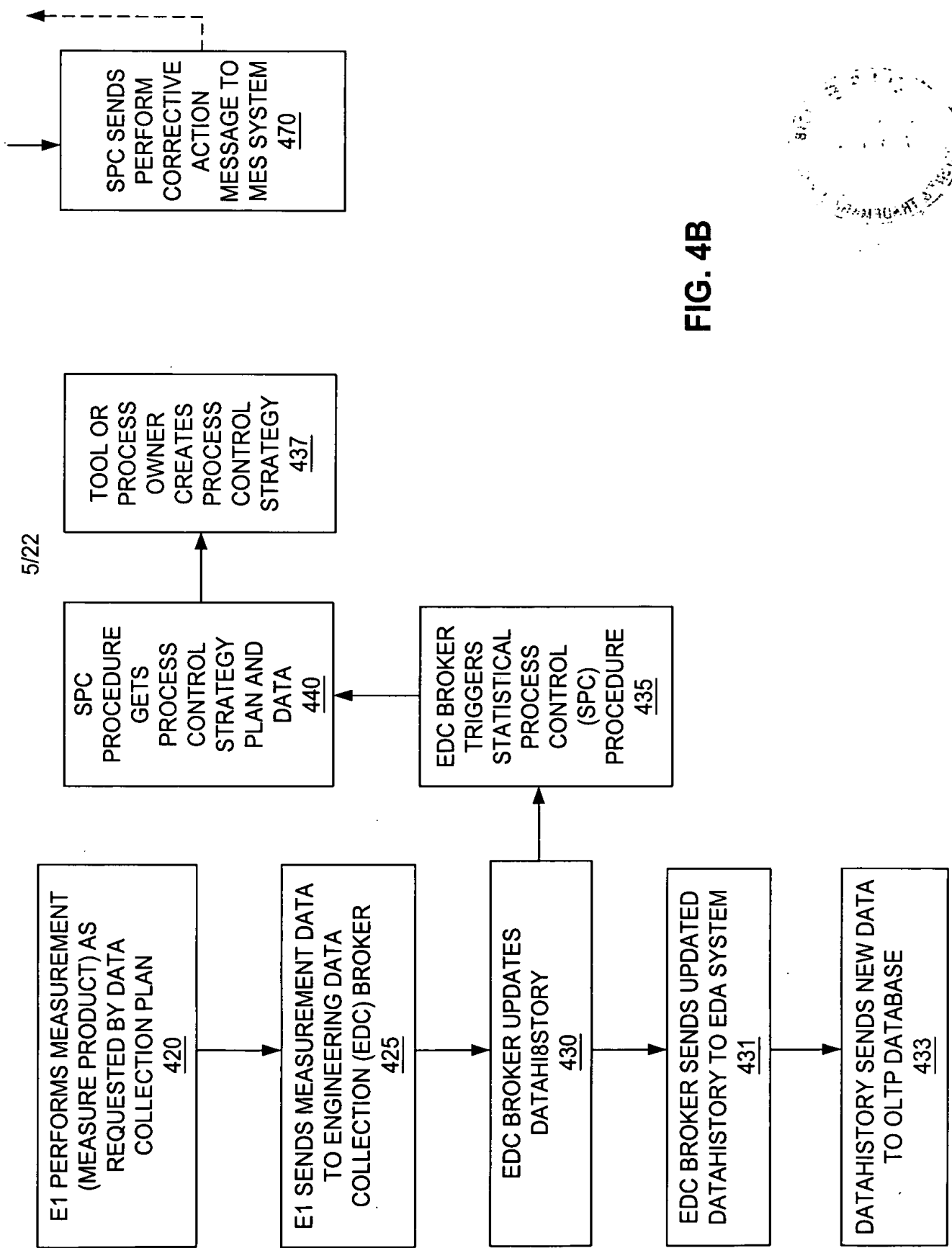
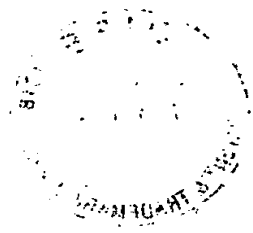
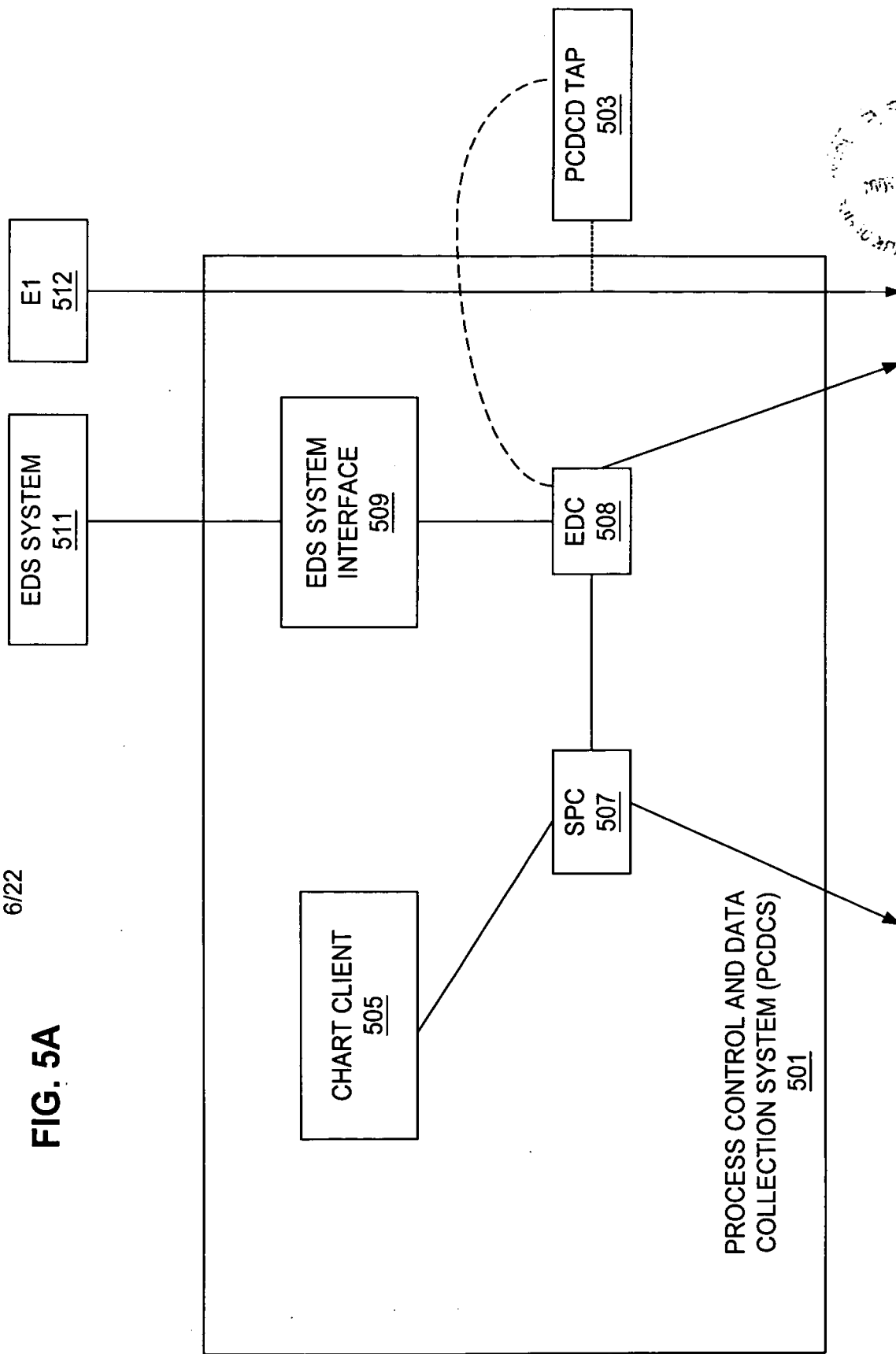


FIG. 4B



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FIG. 5A



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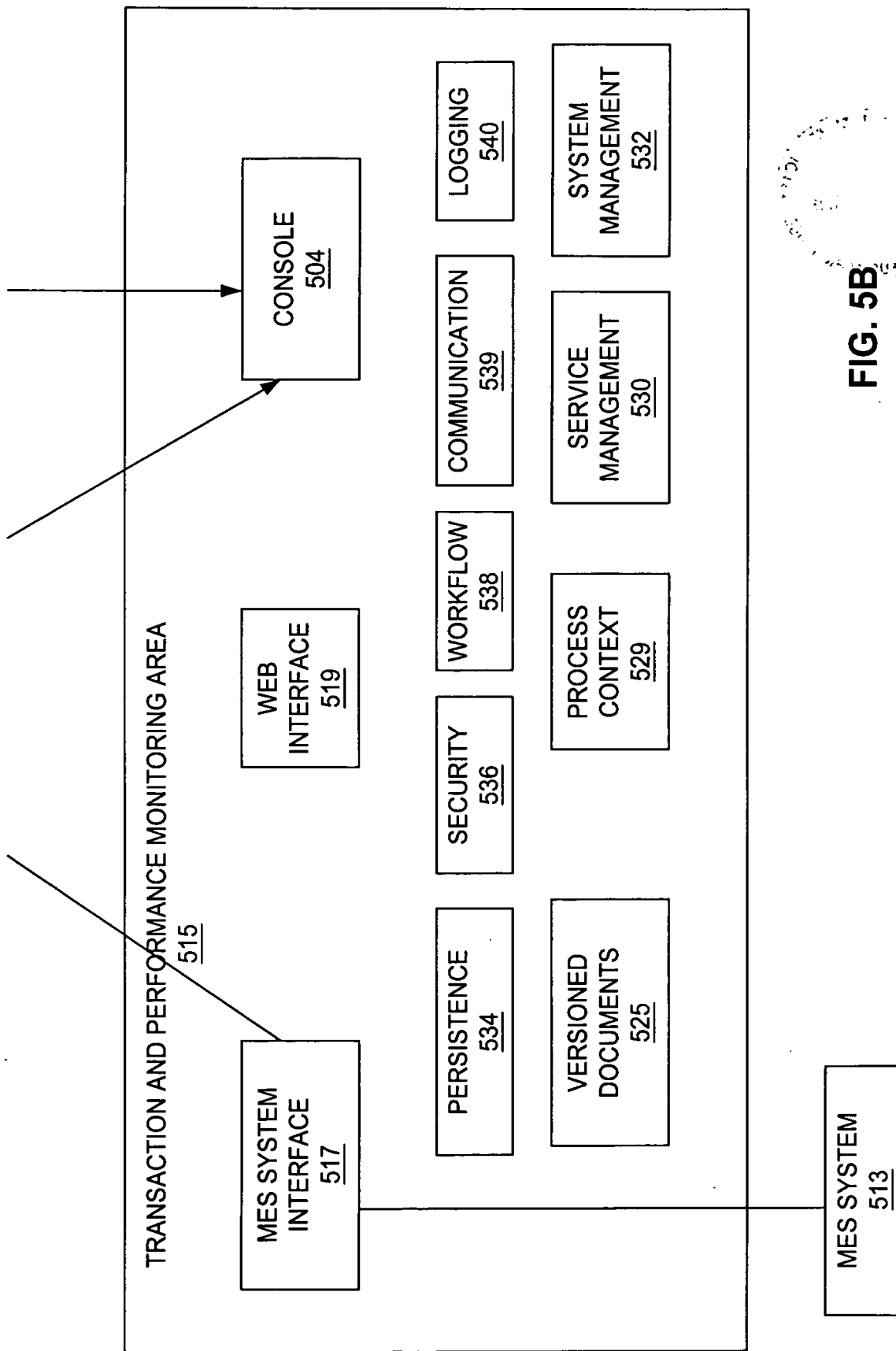


FIG. 5B

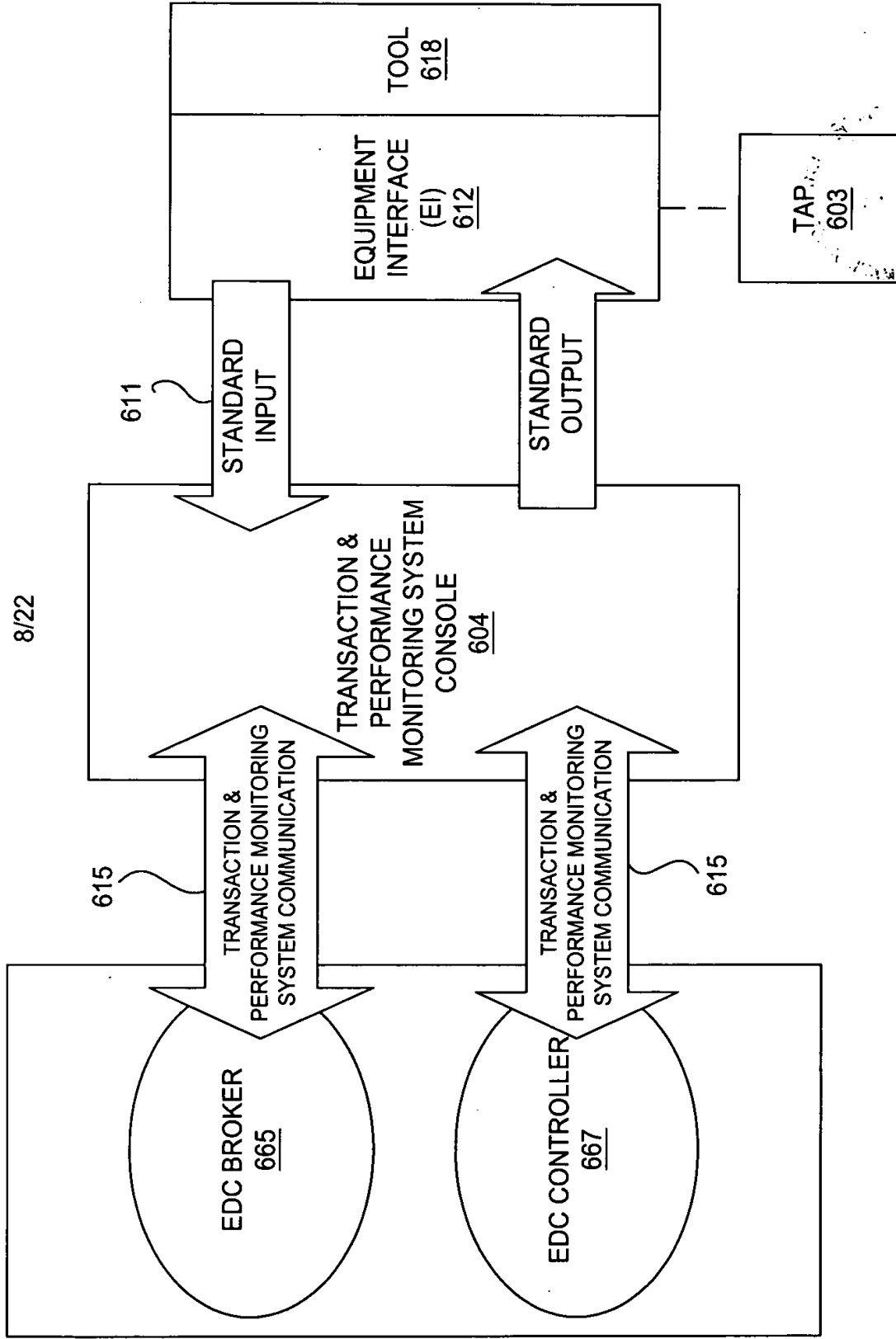
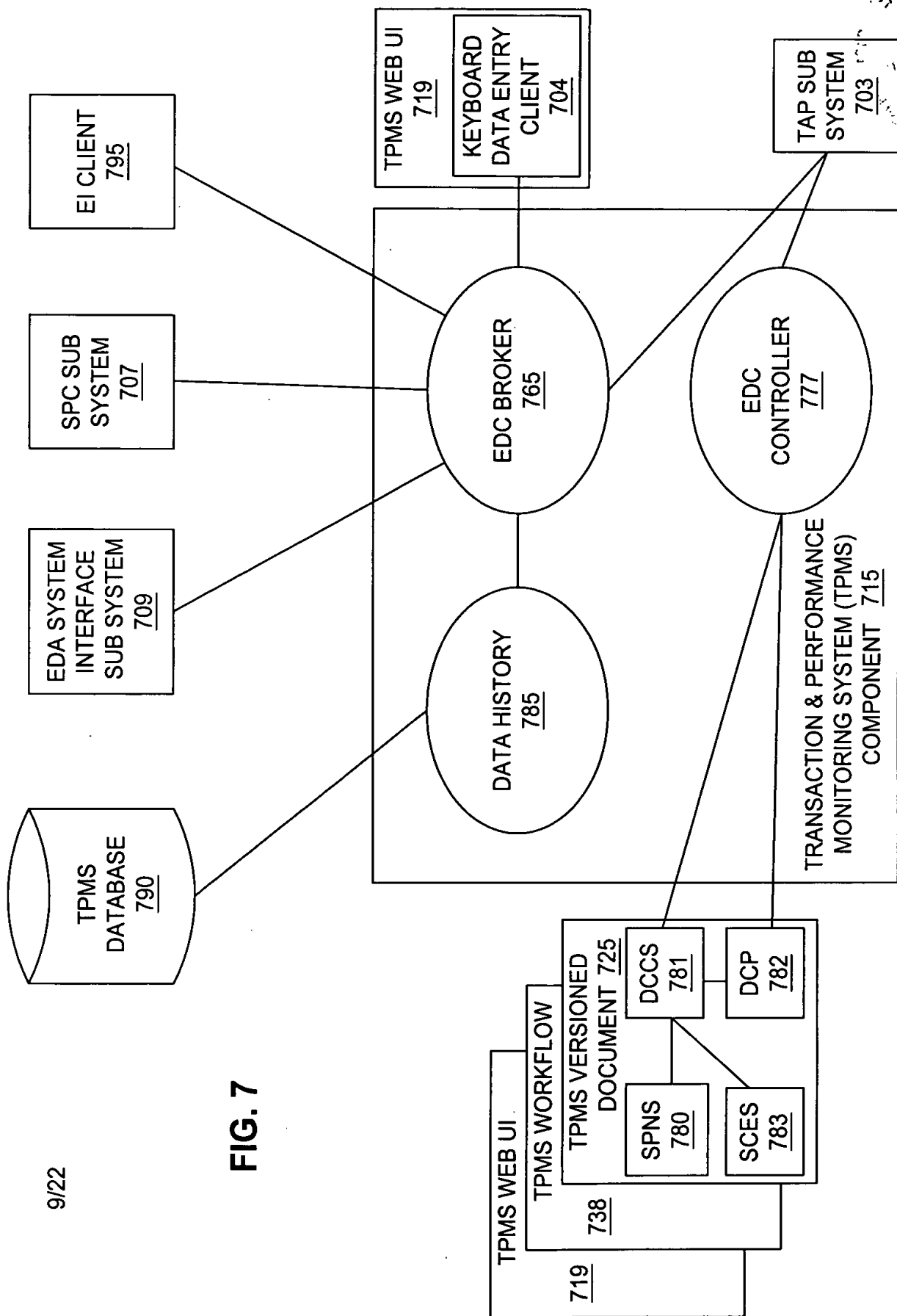


FIG. 6

FIG. 7



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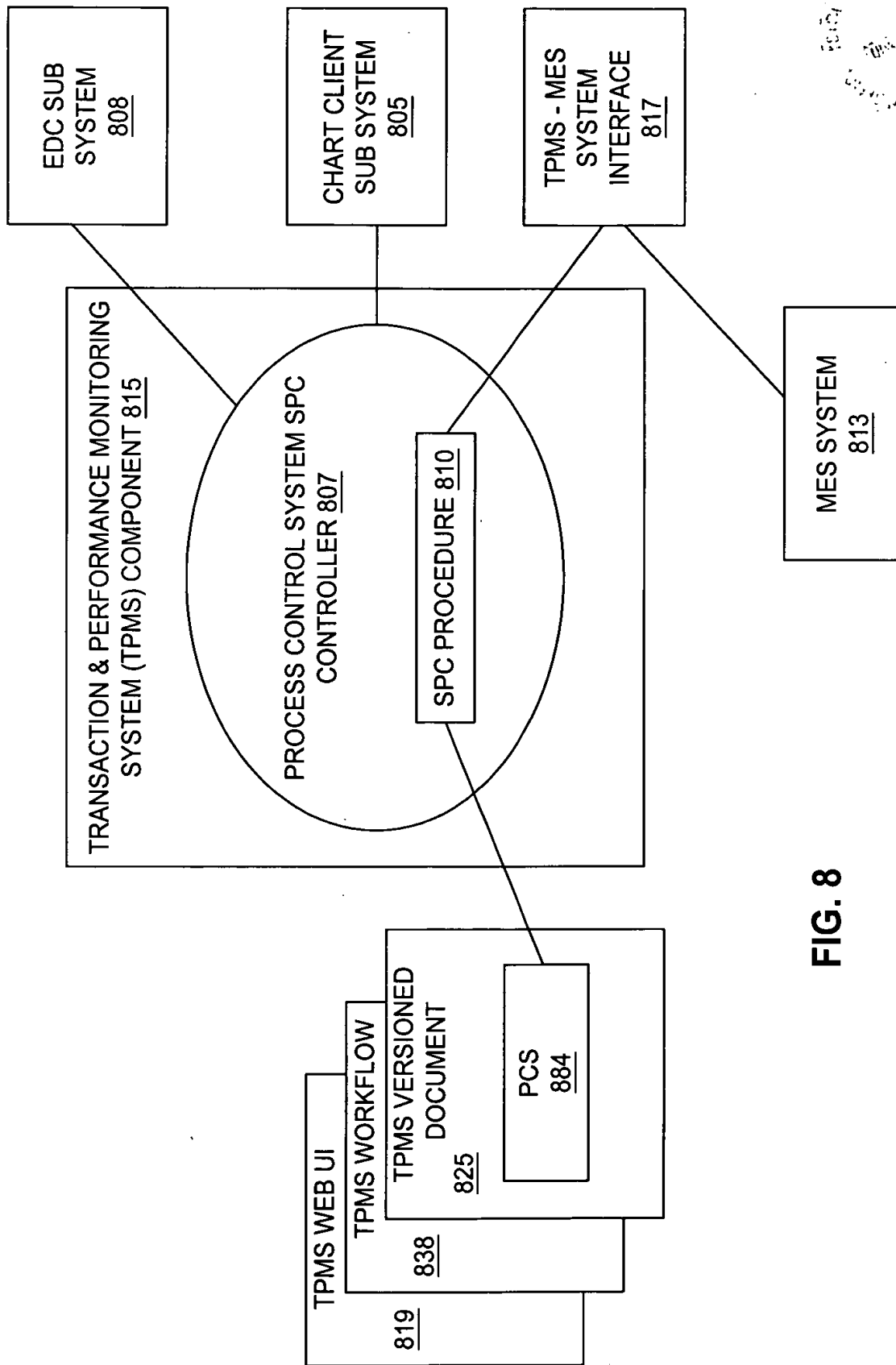
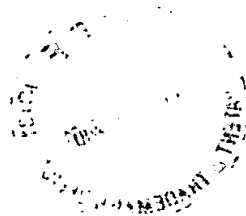


FIG. 8



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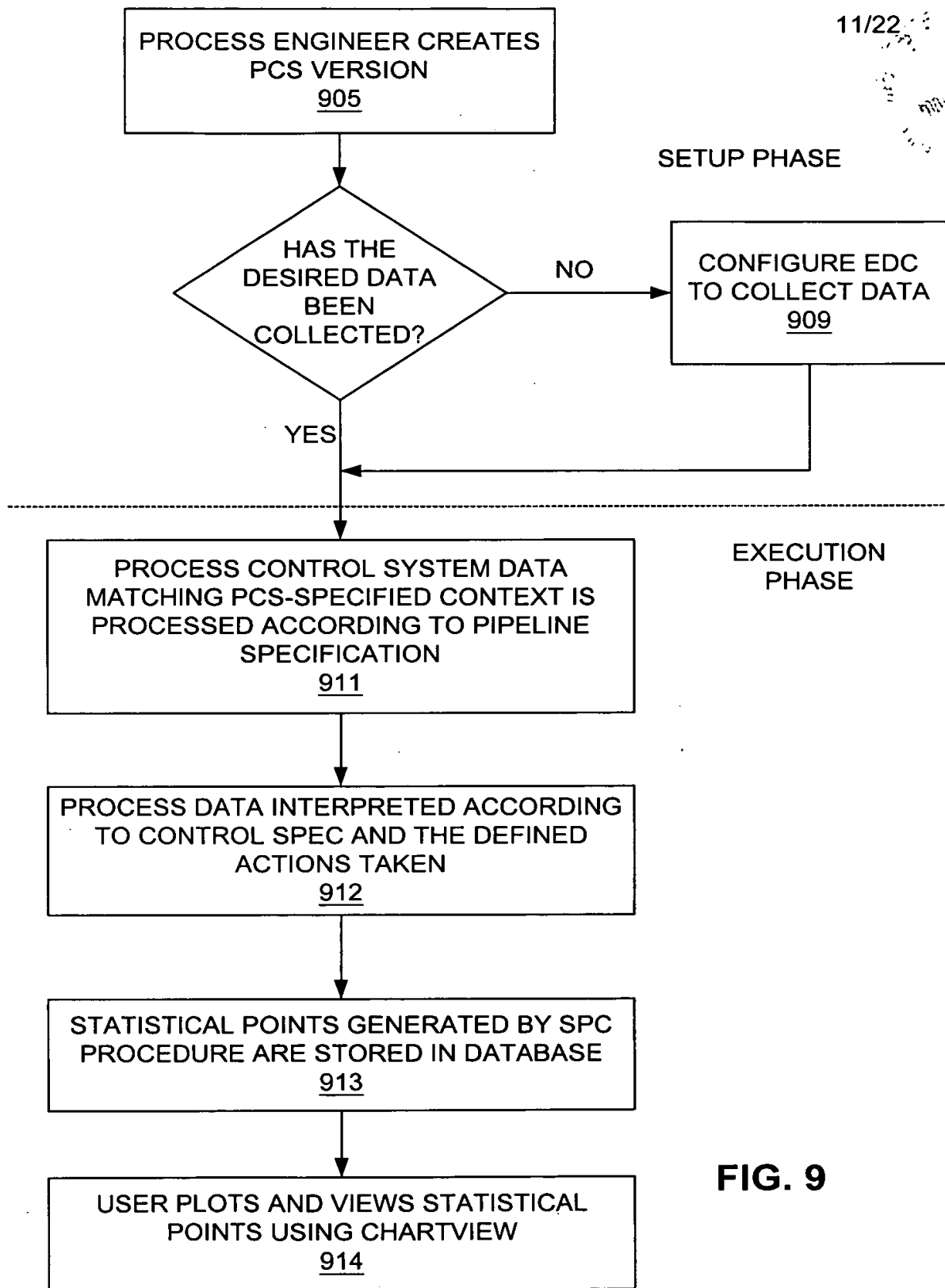


FIG. 9

0905220-101501

09905220-101501

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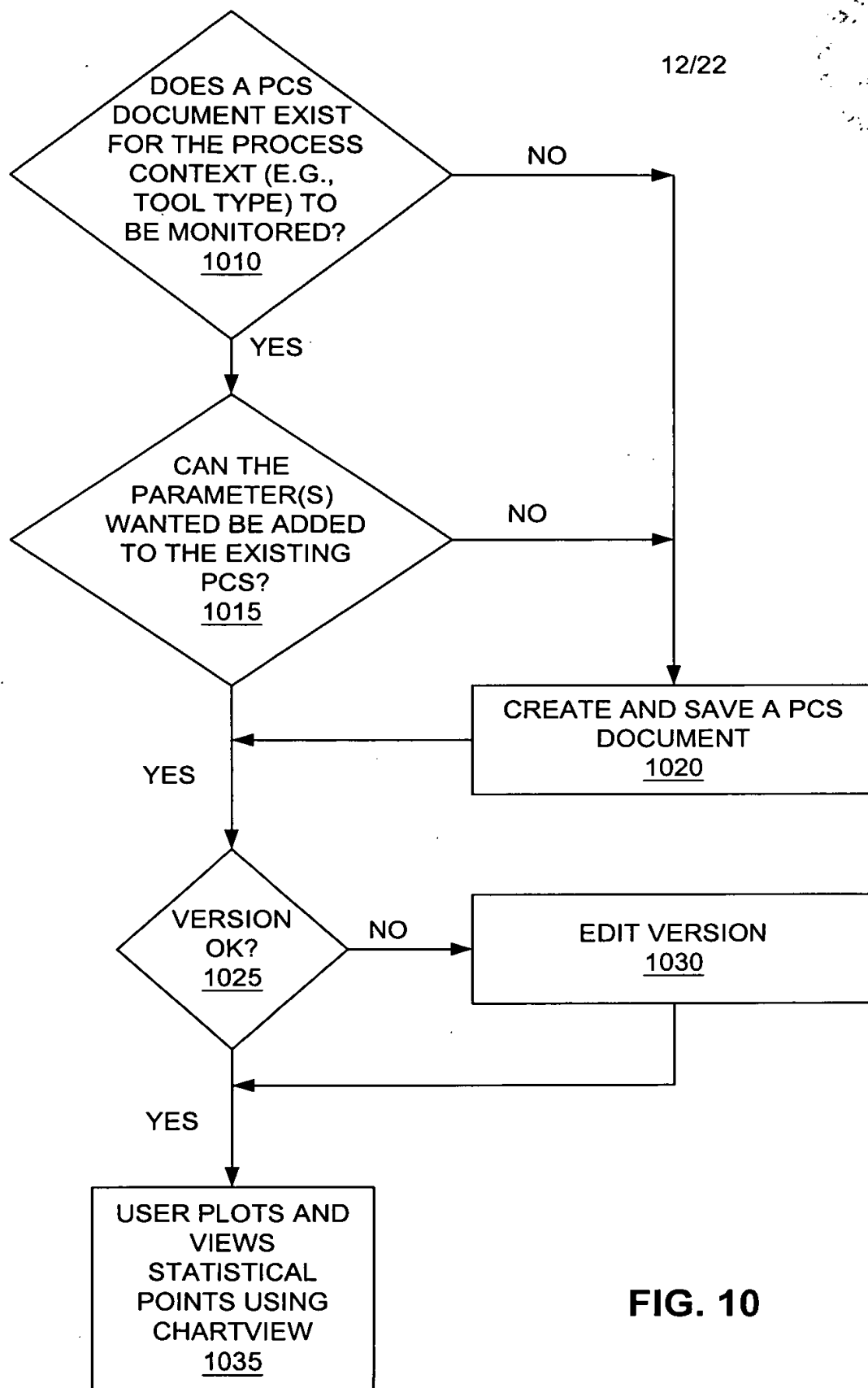


FIG. 10

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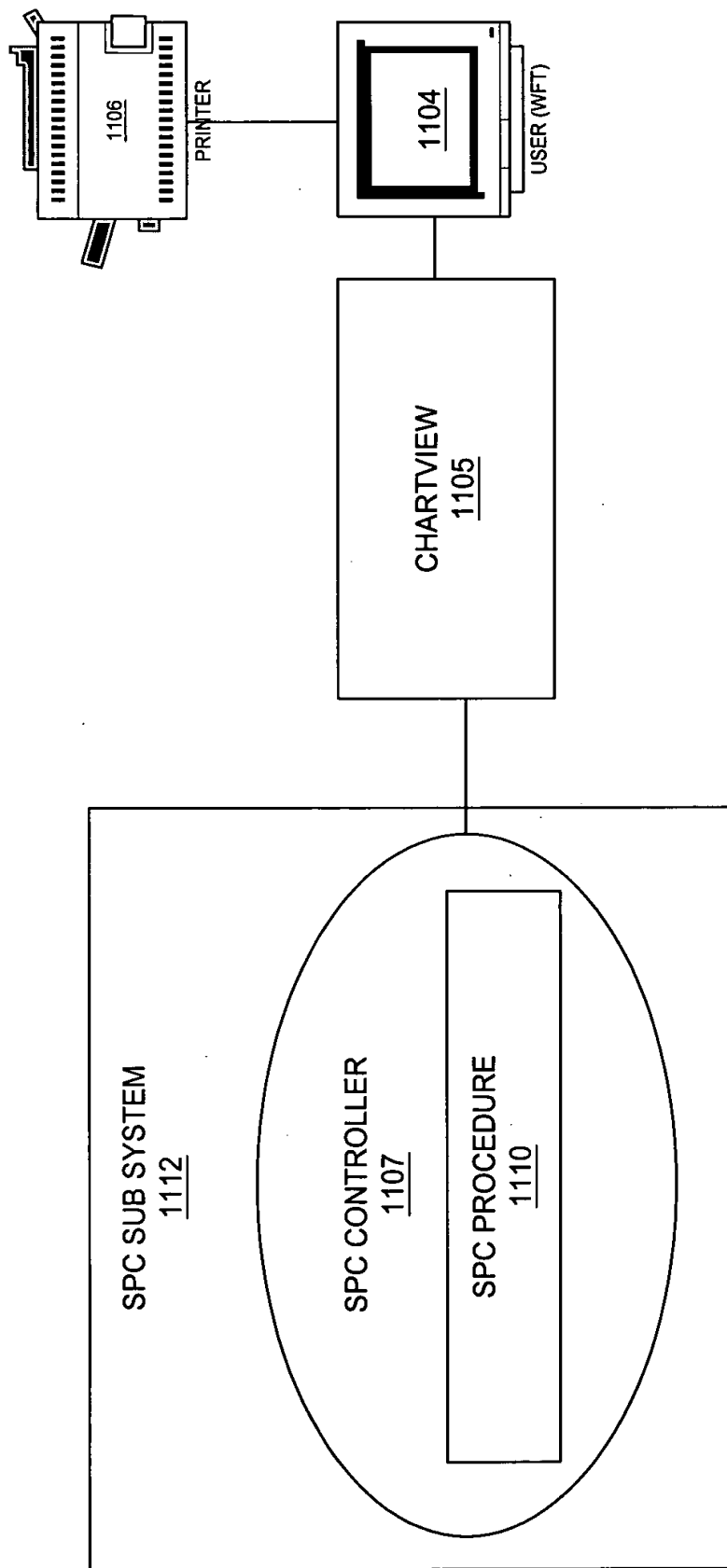


FIG. 11



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1200

X CHART NAVIGATOR

MODULE

ETCH

1210

NUMBER OF RUNS TO DISPLAY

100

1215

1205

CHARTS:
NORMALIZED MULTIEVEL FICD
SIMPLE PCS
MULTILAYER NORMALIZED PCS BY GRO
DO NOT DELETE THIS TIME GRR
PRE_POST DEEP PIPELINE PCS

1217

OK

1218

CANCEL

FIG. 12

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1300

1310

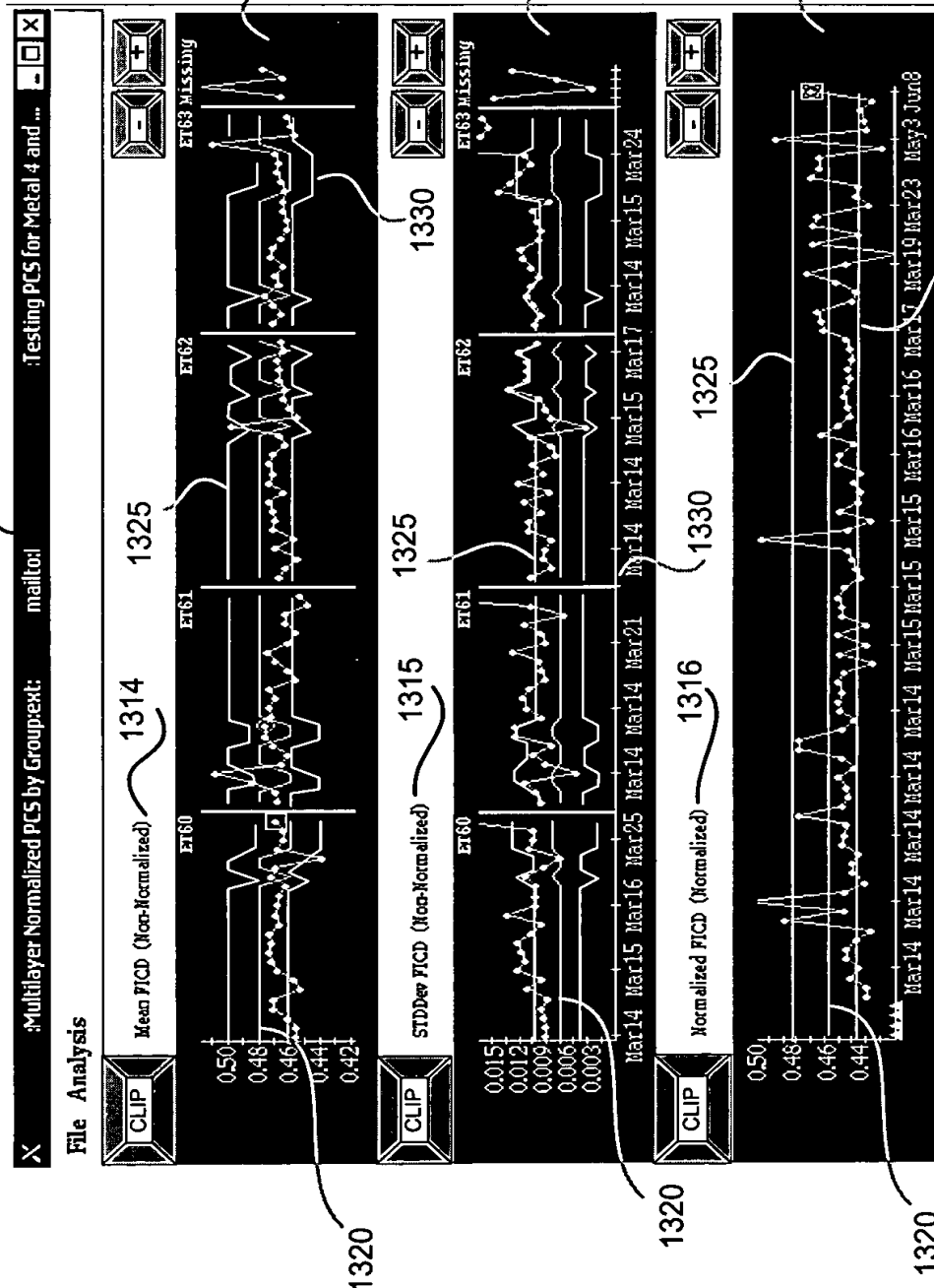


FIG. 13

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NORMALIZE X WITH ITS OWN
MEAN, A, AND STANDARD
DEVIATION, B
1410

LET Z BE ANOTHER RANDOM
VARIABLE WITH ITS OWN MEAN, C,
AND STANDARD DEVIATION, B
(TARGET RECIPE)
1420

APPLY TRANSFORM
 $Y = [(X-A)/B] D+C$
1430

DENORMALIZE X USING MEAN AND
STANDARD DEVIATION OF Z
(TARGET RECIPE)
1440

PLOT Y AND Z TOGETHER WITH
CHART CLIENT
1450

FIG. 14

0909220 101501

FD-503 (Rev. 11-27-60)

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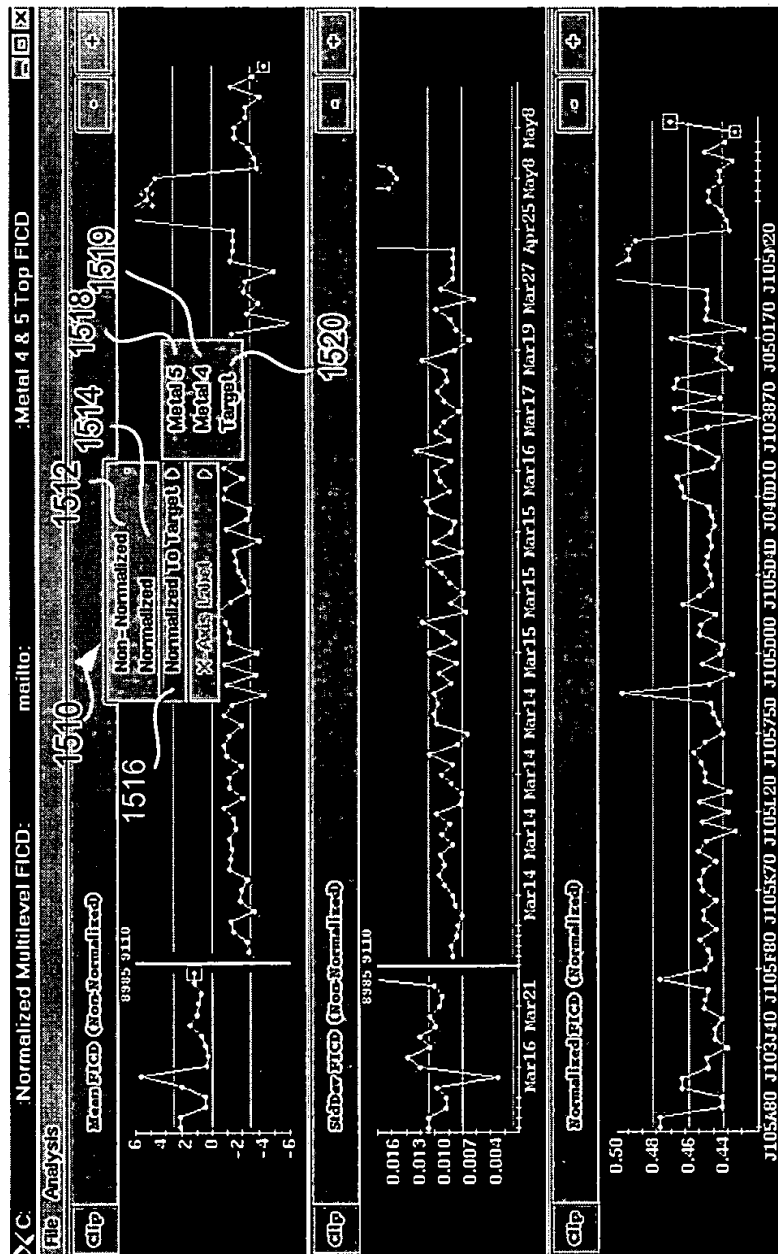
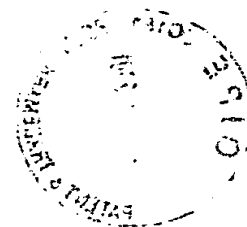


FIG. 15



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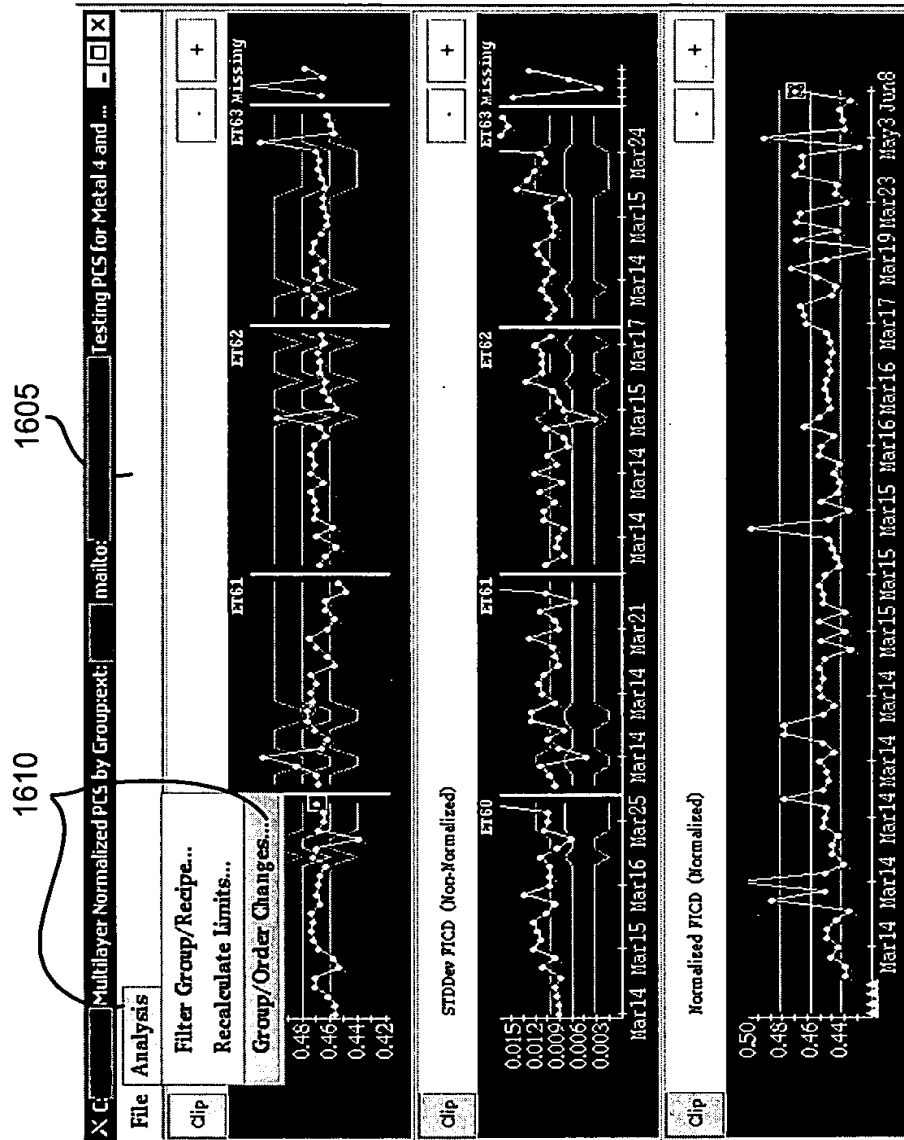
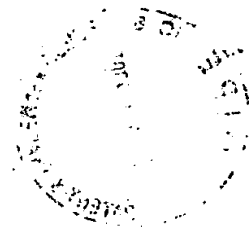


FIG. 16



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X ALTER GROUPING, ORDERING

1705

STATISTIC

1706

MEAN FICD

1707

STDDEV FICD

1708

NORMALIZED FICD

LINKED

☒

☒

☒

1710

1715

GROUP BY

PROCESS TOOL

PROCESS TOOL

NONE

1720

ORDER BY

PROCESS TIME

PROCESS TIME

PROCESS TIME

GO

1725

CANCEL

1730

FIG. 17

TOPOT 02250660

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1811

X GRAPHPOINT DETAIL WINDOW

GENERAL INFORMATION SCF

GENERAL

VALUE: 0.524400
UCL: 0.5
TARGET: 0.48
LCL: 0.46
PCS RECIPE: METAL 5
RUNLD: 106537
OOC VIOLATION: ONE OUT ABOVE [WE CONTROL RULES]

ATTRIBUTES	VALUE
LOT	J105M20
OPERATION	9110
PRODUCT	6308AC
MEASUREMENT TIME	2001-04-25 13:32:04
OPAL	C012
BATCH	

OUT-OF-CONTROL ACTIONS

ACTION	CORRECT	MESSAGE
SHUTDOWN TOOL	BRING BACK TOOL	
HOLD LOT	RELEASE LOT	
EMAIL		

ANNOTATION HISTORY

TIME	CREATOR	ANNOTATION
1825		

DONE

ADD

1810

1812

1814

1816

1835

1830

1821

1820

1800

FIG. 18



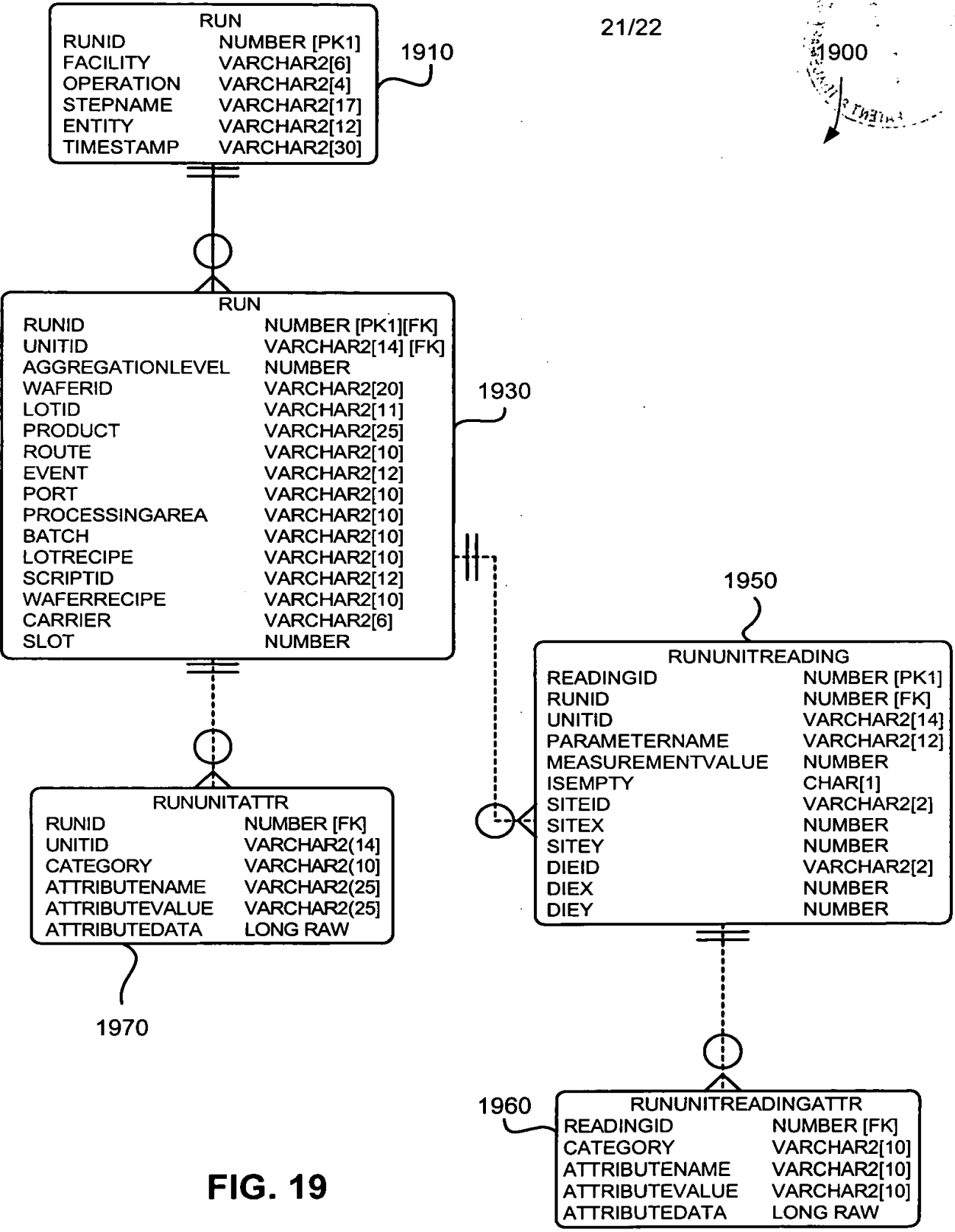
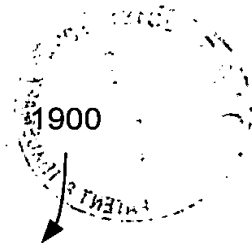
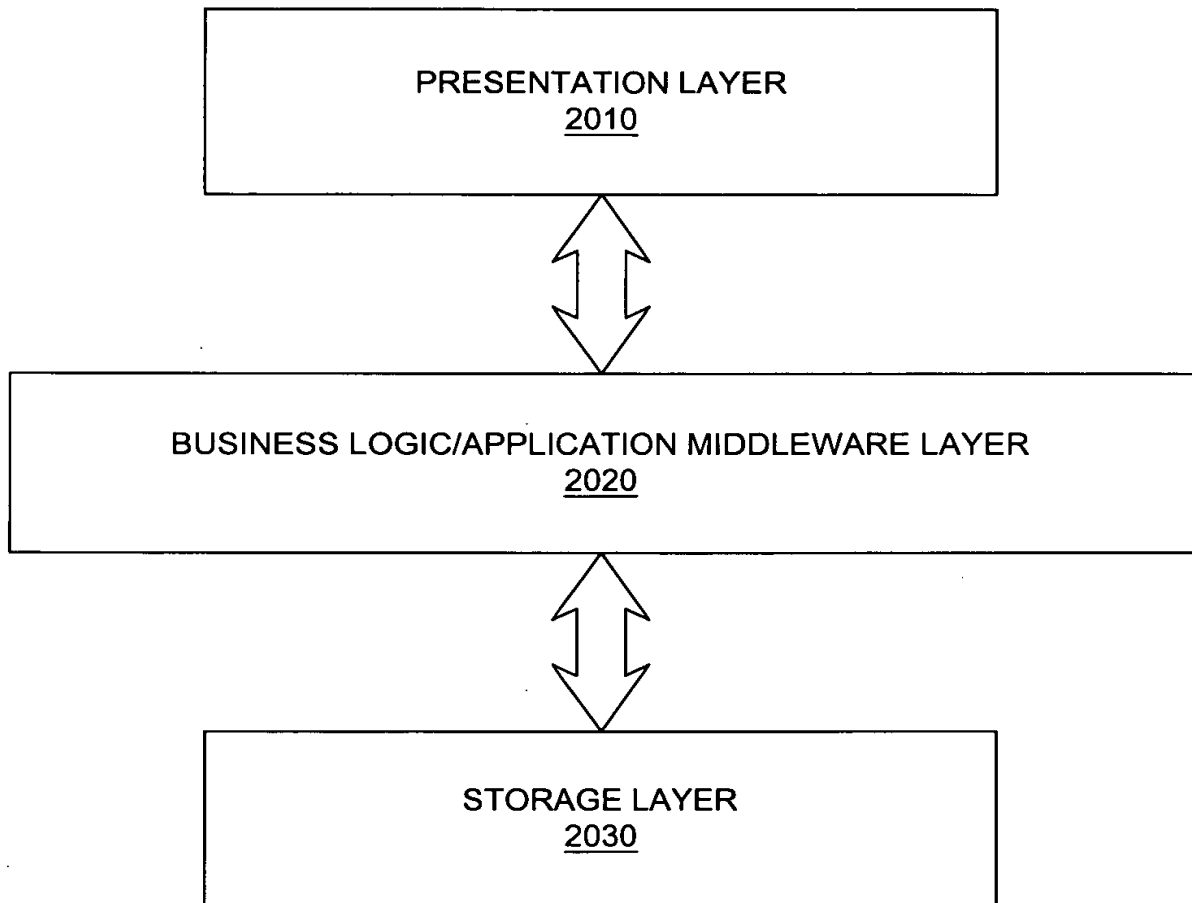


FIG. 19

**FIG. 20**